

## Previous Nelson J. Leonard Lecturers

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1986-1987	James P. Collman	Stanford University
1987-1988	Sir Derek H. R. Barton	Texas A&M University
1988-1989	Christopher T. Walsh	Harvard Medical School
1989-1990	Donald J. Cram	University of California, Los Angeles
1990-1991	Richard R. Ernst	Eidgenössische Technische Hochschule, Zürich
1991-1992	Thomas A. Steitz	Yale University
1992-1993	K. Barry Sharpless	Scripps Research Institute
1993-1994	Rudolph A. Marcus	California Institute of Technology
1994-1995	Phillip A. Sharp	Massachusetts Institute of Technology
1995-1996	Martin Rodbell	National Institute for Environmental Health Sciences
1996-1997	John D. Roberts	California Institute of Technology
	Sidney M. Hecht	University of Virginia
	Peter G. Schultz	University of California, Berkeley
	Albert Eschenmoser	Eidgenössische Technische Hochschule, Zürich
1997-1998	F. Sherwood Rowland	University of California, Irvine
1998-1999	Jean-Michel Savéant	Centre National de la Recherche Scientifique
1999-2000	David A. Tirrell	California Institute of Technology
2000-2001	Alastair Ian Scott	Texas A&M University
2001-2002	Amos B. Smith III	University of Pennsylvania
2002-2003	Lawrence J. Marnett	Vanderbilt University
2003-2004	Robert S. Langer	Massachusetts Institute of Technology
2004-2005	Thomas R. Cech	Howard Hughes Medical Institute University of Colorado at Boulder
2005-2006	Joseph M. DeSimone	University of North Carolina-Chapel Hill
2006-2007	Rolf Thauer	Max Planck Institute for Terrestrial Microbiology
2008-2009	Roger Y. Tsien	University of California, San Diego
2011-2012	Ada E. Yonath	Weizmann Institute of Science
2012-2013	Stephen J. Benkovic	The Pennsylvania State University



*Nelson J. Leonard Distinguished*

**2014 LECTURER**



**Jeffrey Alan Hubbell**

Ecole Polytechnique Fédérale de Lausanne (EPFL) – ETH Zurich

*Professor of Bioengineering and Chemical Engineering*

Protein <sup>and</sup> Materials  
Engineering <sup>for</sup> Controlling  
Immunological  
<sup>and</sup> Morphogenetic  
Processes

**April 4, 2014**

*Protein and materials engineering for controlling immunological and morphogenetic processes*

3:00 p.m.

116 Roger Adams Laboratory

Reception - 117 Roger Adams Laboratory immediately following lecture

SCHOOL OF CHEMICAL SCIENCES

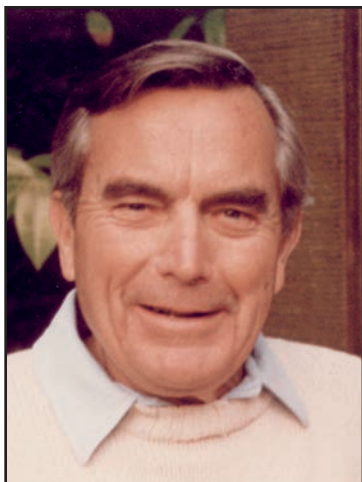
 **ILLINOIS**  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

## Nelson J. Leonard

This lecture series is made possible by the Nelson J. Leonard Distinguished Lecturer Fund, established in 1986 by the late Mrs. Louise Leonard, Eli Lilly and Company, the Monsanto Company, Organic Syntheses, Inc., and Professor Leonard's colleagues and students. At the time of his retirement in 1986, Professor Leonard had been at the University of Illinois for 44 years, directed 120 graduate students, and published over 400 papers.

Professor Leonard received his B.S. from Lehigh in 1937, a B.Sc. from Oxford in 1940, a Ph.D. from Columbia in 1942, and a D.Sc. from the University of Oxford in 1983. He also received three honorary doctoral degrees.

Internationally acclaimed for his skill in organic synthesis, his work answered questions of fundamental importance to biochemistry and life processes. He invented fluorescent probes and dimensional probes of enzyme-coenzyme binding sites and DNA double-helical cross sections.



He received many honors including the ACS award for Creative Work in Synthetic Organic Chemistry (1963), the Medal for Creative Research in Synthetic Organic Chemistry of the Chemical Manufacturers Association (1970), the Roger Adams Award in Organic Chemistry (1981), the first Creativity Award, University of Oregon (1994), and the first Paul G. Gassman Distinguished Service Award, Division of Organic Chemistry, American Chemical Society (1994). He was a member of the National Academy of Sciences, a foreign member of the Polish Academy of Sciences, a fellow and past vice-president of the American Academy of Arts and Sciences, a member of the American Philosophical Society, and an honorary member of the Pharmaceutical Society of Japan.

At the time of his passing in the fall of 2006, Professor Leonard was a Faculty Associate in Chemistry at the California Institute of Technology.

Gifts in support of the lecture fund may be directed to: University of Illinois Foundation, Attn: Nelson J. Leonard Distinguished Lectures Fund - 1305 W. Green St., Urbana, IL 61801, or you may contact Nick Jaeger directly at [njaeger@illinois.edu](mailto:njaeger@illinois.edu)

## Jeffrey Alan Hubbell

Jeffrey A. Hubbell was born in Kansas City, Missouri. He received his Bachelor of Science degree from Kansas State University in 1982, and his doctorate from Rice University in 1986, both in chemical engineering. He was assistant then associate professor of chemical engineering at the University of Texas, Austin, from 1986-1994, and professor of chemical engineering at the California Institute of Technology from 1995-1997.

Hubbell next moved to Switzerland, where he initially served as a professor of biomedical engineering and director of the Institute for Biomedical Engineering at the Swiss Federal Institute of Technology and the University of Zurich. In 2003 he moved to École Polytechnique Fédérale de Lausanne (EPFL) to serve as founding director of the Institute of Bioengineering.

In February 2010, Prof. Hubbell was elected to the prestigious National Academy of Engineering, the first EPFL Professor to enter the US-based institution in his field. He is the former president of the Society for Biomaterials, and is an elected fellow of Biomaterials Science and Engineering, the American Association for the Advancement of Science, and the American Institute of Medical and Biological Engineering.



Earlier in his career, Prof. Hubbell received the W.J. Kolff Award for Outstanding Research from the American Society of Artificial Internal Organs, the Outstanding Dow Young Faculty Award from the American Society of Engineering Education, and the National Science Foundation's Presidential Young Investigator Award.

Hubbell's laboratory is directed toward biomaterials issues in tissue engineering, cell-based therapies, drug delivery, and medical devices. It involves polymer chemistry and cell biology ultimately directed toward altering some medical outcome. Current research addresses means by which the recognition of biological and synthetic polymers may be controlled, for example means by which to use polymers to block recognition in wound healing and immunity, by which to incorporate protein-like structures into synthetic materials, and by which to endow synthetic materials with the ability to be degraded by the cellular processes involved in tissue remodeling. Current clinical targets are cardiovascular implants and healing, nerve regeneration, post-surgical healing, and general aspects of the controlled delivery of proteins and genes.